Digital Centre of government: response to the House of Commons Science, Innovation and Technology Committee's call for evidence

Summary

The IET welcomes the introduction of the digital centre of government, however there are certain steps that the Science, Innovation and Technology Committee should take prior to its implementation. These steps include:

- Government must outline the duties of the digital centre and assess its benefits and challenges by looking back on previous best practices from Government Digital Services (GDS). Once this has been done, government can then finalise their Key Performance Indicators (KPIs).
- There needs to be a clear, intricately planned and technical strategy for implementing the digital centre, to ensure the delivery is timely, effective, and safe from data vulnerabilities.
- Government should have a strong communications strategy to ensure that it is clear why the digital centre is being introduced, and what centre wants to achieve.
- The digital centre should be led by professionals / experts in business who have experience in digitalisation as they will understand the market, and how to successfully navigate the complexity of digital transformation.

Please note that this is not an exhaustive list. We do elaborate on the points above, as well as other points / concerns, in the full response.

Regarding the 'kickstarter' tests and programmes, the IET fully supports DSIT collaborating with organisations across the public sector to support the government's goal of 'Get Britain Working', however there are some reservations around the other 'kickstarter' tests and programmes which we explore further in our response.

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1. What benefits will a digital centre offer citizens?

Government must outline the duties of the digital centre and assess its benefits and challenges by looking back on previous best practices from GDS.

One benefit of the centre would be to provide streamlined and more coherent access to government services - making it simpler, easier and quicker to get the information that the user is looking for. Government should use this opportunity to progress the agenda of multiple interoperable databases, as it will make it easier to coordinate across government departments. However, the interoperable databases should be used to deliver benefits

quickly, such as helping the civil service and public sector be more collaborative and efficient, rather than being a permanent feature.

The centre also needs to be accessible enough for the public to effectively use it, whilst remaining secure enough that it is protected against the threat of a cyber-attack or GDPR breach.

The social science strand of the centre needs further assessment; the creation of the centre is very technical; however, the consultation does not provide enough detail regarding the impact that it will have on society or its users.

- **What benefits will a digital centre deliver to the UK economy?**

The digital centre could be a genuine asset to government; however, this is dependent on the effectiveness of its service. If effective, the centre will ease apprehension from the public around new technologies and help facilitate modern technologies into everyday life and government operations. If ineffective, it will represent a poor return for investment. It is critical that information is not lost from service to user. (Source: Sense about Science, Responsible Handover, 2024).

It is important to learn from examples of good practice and avoid past errors. For example, GDS, created in 2011, was successful in terms of digital progression and impressed countries around the world. GDS's visionary and implementation-focussed strategy, coupled with it being operated by digital experts and treated like a start-up, led to a huge jump in usability of digital services across the UK. Although GDS will be incorporated into the digital centre, we strongly recommend following the set-up template of GDS as this will ensure that the digital centre has a strong foundation to exceed and be the tool that the UK needs.

- **How effectively has the vision for a digital centre been communicated?**

Having one department uniting digital transformation efforts will make it easier and less time consuming for users to access the appropriate service. However, a strong communications strategy is pivotal to ensure that it is clear why the digital centre is being introduced, and what government want to achieve though the centre. The information surrounding the introduction of the digital centre has not been communicated clearly. We are aware of this call for evidence through our own research, therefore, it is difficult to see that the public are aptly aware of its planned introduction.

It is also important how government offers this service to its users. Complexity should stay within the organisers of the service; it should be an aim that complexity is not pushed onto users as this will hinder support for the centre.

2. What should be the priorities for the digital centre of government?

There needs to be a clear strategy for implementing the digital centre, particularly as digitalising is a long process that needs to be timely, effective, and safe from data vulnerabilities, particularly in such data sensitive environments. This strategy should also ensure that the mandate and duties of the digital centre do not overlap with the mandate and duties of other government departments.

Cyber security breaches within government would have a significant impact on the public, not just financially, but in terms of health, transport and employment, amongst others. A strong cyber security strategy and appropriate skills within the digital centre will be important, particularly as it may be vulnerable to attack.

The digital centre should ensure that it is challenge based to solve known issues, GDS was a success as it addressed issues one by one with a targeted and systematic method.

Another priority for the digital centre should be to focus on the social science aspect of its implementation in order to make it as usable and as accessible as possible for everyone. GDS had success after including a statutory obligation for government to design digital services accessibly.

- **Are there any areas of the public sector that are particularly suited to or in need of digital transformation?**

The NHS needs to continue its digital transformation, but as previous governments have already invested heavily in this, any further investment needs to be targeted. In particular, an underlying digital infrastructure that addresses current digital inequalities and the silos created around existing assets (such as proprietary Electronic Health Record Systems) should be delivered to enable the 'tilt to digital', as called for in the independent investigation of the NHS in England.

Beyond the NHS IT estate, digital connectivity across community must be integrated to realise the 'tilt to preventative' model called for by Lord Darzi. This addresses digital poverty and literacy in domestic settings, allowing the UK to realise the potential of a "cradle to grave" NHS when delivering improved health outcomes for the nation and fuelling the development of innovative healthcare technologies.

* When undertaking the digital transformation, each area of the public sector should be treated individually as they each have differing concerns and needs.

- **Has DSIT identified the right areas of public services with its initial five 'kickstarter' tests and products?**

The five 'kickstarter' tests and products are in appropriate areas, however, there needs to be a clearer definition / roadmap as to what their aim is and how they are going to be achieved. Implementation will be integral to success. The government may find value in looking over the template of GDS as guidance.

The GOV.UK Wallet could be successful; however, it needs further explanation as to what it is and what the benefits are that it offers. The UK could draw upon examples from other countries, such as Italy, which has successfully had a form of government wallet implemented for four years. There are still lessons that can be learned from Italy's adoption of the government wallet, such as: accessibility and clarity on what the wallet is and what it will be used for.

The IET fully supports DSIT collaborating with organisations across the public sector to support the government's goal of 'Get Britain Working'.

In theory the Large Language Model (LLM)-powered chatbot will be useful, but its introduction needs significant thought so that it delivers value to the user. There is a danger of this becoming a superficial tool, despite investment. Government needs to be conscious that chatbots can become exceptionally complex, costly and time consuming; even leading businesses in the private sector are struggling with implementing advanced chatbots.

It is difficult to do any reasonable cost or time analysis for a chatbot and therefore, needs to be appropriately analysed before putting all resources into this. In order to mitigate the risk of the LLM chatbot de-railing digital transformation if it is unsuccessful as a public facing product, the IET recommends starting the LLM with specific use cases - keeping the LLM initially quite small but grow it if it is a success.

Chatbots must be trained on data appropriate for its use and there are concerns surrounding the use, training and privacy of personal data. As this chatbot will be the government interface of GOV.UK, the chatbot must be stringently compliant with GDPR, and have strong

cyber security, particularly as the data cannot go outside of the government cloud. However, putting the appropriate measures in place to adhere to GDPR, whilst making it cyber-secure, will lead to additional costs which must be considered. Cyber security can be enhanced by establishing a Chief Cyber Security Resilience Advisor, harnessing the expertise of professional bodies, and upskilling and reskilling in this area.

Aside from the cost, complexity and timeliness of an LLM, one of the biggest problems with chatbots is that users often do not realise how dysfunctional they can be, whereas other techniques do not make as many mistakes, such as “conversational agents”. These are still useful if pointing to advice and resources is the main output, however, they can be poor at understanding non-programmed questions or colloquialisms as they have limited NLP. Ultimately, the important thing for the digital centre to ensure is that the LLM is not being used as a ‘magic bullet’ due to the energy and water usage and ensuring that alternative computational methods and better UI techniques are also employed to help make information easier to find.

However, if the centre pursues piloting a chatbot LLM, government must be clear on the decision-making process for chatbot model implementation, and address and acknowledge foreseeable issues. The chatbot should not replace human interaction either. Human interaction still needs to be an option, particularly if the chatbot is malfunctioning.

The IET encourages government to also look at the environmental impact of any large-scale implementation. Particularly as the data centres and network infrastructures that are needed to operate the AI models consuming large amounts of energy and water. Currently AI’s energy use only represents around 2-3% of total global emissions. (Source: World Economic Forum, AI and Energy) However, this is likely to increase as adoption of AI increases to drive efficiency and productivity. The IET has published a paper highlighting the impact AI has on the environment, you can find the paper here.

The AI accelerator programme is a strong idea in principle, and upskilling is important if the digital centre is to be a success, particularly as 47% of employers report a technical skills gap within their current workforce, 49% of employers says it harms productivity, 35% say it restricts growth, 35% say it harms innovation, and 29% say it reduces ability to deliver contracts (Source: IET Skills for a digital future skills survey, 2023). However, there is no specification within the consultation outlining the scope and level of investment into this programme, and it is therefore difficult to decipher how success of this programme will be measured. The government should look to upskill its own employees to use AI appropriately, otherwise recruitment of skills could be challenging and costly, particularly when in competition with the private sector. There is also the risk that those that have been upskilled through the AI accelerator may seek employment in the private sector rather than public sector, and those that have been upskilled will become quickly redundant and unable to effectively operate in a digitalised government. Therefore, upskilling of the civil service is critical to success.

Government could employ a delivery partner to provide training as it is an exceptionally technical and difficult area. It could be outsourced to the market and educational system to help upskill through education, for example: universities, schools and professional institutions. There are already institutions doing this on a smaller scale, and at PhD level, that the government may wish to collaborate with (UKRI the PCS, the IET, the Turing Institute).

The introduction of the cross-government vulnerability scanning service is welcome, however, we recommend that the government utilise the world-leading organisations (GCHQ/NSCS) that already monitor this, rather than launching their own programme. It would be beneficial to assign the scanning service to those organisations, therefore taking the responsibility from government and allowing experts and professionals to take the mantle, however they need to be sufficiently resourced to deliver the capability.

There should also be a compliance / self-certification / audit approach taken, similar to SOX or TISAX compliance in large scale corporate organisations, to ensure information security processes and procedures and being actively complied with.

- **How should DSIT measure and evaluate the success of the digital centre?**

A clear assessment should be made at the outset to define challenges, solutions and risks. Once this has been done, government can then finalise their KPIs.

The 2011 GDS's measures of success may be a useful reference as it was assessed on digital usability by citizens and the number of items being digitised; it worked to identify an issue and resolve it methodically. It is proven that addressing the easily accomplishable targets that provide a lot of benefits is a very efficient and effective way of achieving quick success.

The KPIs for the digital centre would be best measured against its key goals for example: if the target is to upskill through the AI accelerator 'kickstarter' programme then success should be reflected by the amount of people that have been appropriately upskilled since its implementation.

A key measurement of success is having a good implementation strategy. To excel in implementing the digital centre, each aspect must have its own KPI, rather than a blanket KPI as though the digital centre is being operated as a business.

3. What lessons are there for DSIT as it establishes the digital centre?

The digital centre of government should avoid duplication of existing products and services, the centre should be led by professionals / experts in business who have experience in digitalisation as they will understand the market, and how to successfully navigate the complexity of digital transformation.

Good implementation is pivotal for the success of the digital centre, implementation is not about policy, but rather outcomes. GDS's work since 2011 is a very positive case study to show how this type of centre should be implemented and operate.

DSIT should use lessons from domestic and international cases as to how the digital centre can be a user-centric service. For example, the NHS app is the most developed government-issued app, yet GP surgeries are only connected to their health trusts rather than being connected to other GP surgeries. This points to the complexities of these systems when on a national scale. Internationally, there are cases where a user-focussed system has been used in theme parks; attendees can receive a band that will have all the information you need for your visit. This helps with the organisation / flow of the theme park and helps visitors navigate their way around the park and get the most out of their time there.

To help make the centre user-focussed, DSIT could introduce a form of identification that an individual can use without revealing their identity, for example, having a unique identifier to allow you to access systems, where the organisation cannot identify an individual (pseudo-anonymisation) but can access the indemnity information if needs be (law enforcement). This will also help with security of date and GDPR compliance. There are countries that the UK could as a template for this, such as: Estonia (population: 1.3 million), or India (population 1.4 billion). This would ensure the digital centre of government is a user-focussed system.

4. What assessment can be made of DSIT's work on establishing the digital centre to date?

The best way to implement the digital centre is to utilise already proven methods and implement them in an intricately planned, thorough and logical way.

The ‘backend’ capabilities required by the digital centre already exists in the market and should be brought in and modified accordingly. This will allow the focus to be on the unique ‘frontend’, requirements of such a system that shows a clear focus on the users and use-cases. Understanding how different parts of society will use the system is vital to ensure that everybody’s needs are met, regardless of their digital capability. The government need to be careful to not exclude people and should ensure they reach everybody, particularly when implementing ideas like the GOV.UK LLM chatbot.

Accessibility could extend to the language that the digital centre of government is available in. The government should investigate making the centre available to those who speak a language other than English. Easier access to government services for those for whom English is not their first language could be a key advantage of the system.

- **What technical and policy expertise does DSIT need to deliver the digital centre?**

There needs to be a balance between policy and technical expertise to create the most effective digital centre. The service should be designed by a committee of experts and / or digital non-executives that have the competence to check in and audit any IT suppliers, especially as the pace of technology change has accelerated hugely over the last 2 years. However, the committee should not be made up of academics, as academia is far behind the big technology advancements in the private sector.

This will also be the best way to implement and manage the appropriate ‘backend’ and ‘frontend’ systems. It is integral that government work with sector experts in every stage of the digital centre, from design to delivery. Collaboration between the public and private sectors is key to ensure the appropriate experts are working on the digital centre of government.

- **Are the technological solutions required for the digital centre already used by government and other public bodies? If not, are they available or in development?**

Research and design (R&D) is not required as the technology that the government needs to successfully implement the digital centre as it already exists in other government departments. Government should focus on the ‘first horizon’ of the three-horizon framework (Source: ITC, Three Horizons Framework), and focus on adoption and implementation of readily available technologies, rather than adding new technology or R&D as it will only slow implementation.

As well as utilising the technology already available, DSIT should assess what impact the centre will have on society.

- **How should DSIT and other public bodies leverage reforms to public procurement to deliver and operate the digital centre?**

There is a need to reform public procurement, but there are already procurement models that would work well for the digital centre. To maximise outputs, the government should identify the main things that are not working well and work to resolve them. They should resolve them by utilising already existing procurement processes and systems - whilst driving adoption of what is already available, for example, SMEs bidding for work. Government should adopt an agile and flexible approach to address these issues, whilst looking at recent consultations and implement their proposed recommendations.

5. What are the barriers to successfully establishing a digital centre of government?

Skills and knowledge: As mentioned when discussing the AI accelerator kickstarter programme, the digital skills gap is a barrier that needs to be addressed if the digital centre to be a success. Out of the employers that reported a technical skills gap in our digital skills

survey, 46% of them cited the technical level, most employers think that senior management do not understand other emerging technologies, and among those that expect AI to be important for them, 50% say they do not have the necessary skills. These skills gaps can be addressed through appropriately upskilling and reskilling the workforce. This can be done through the AI accelerator kickstarter, as well as: on-the-job training, in-house employer training, and through government support (Source: IET Skills for a digital future skills survey, 2023).

Cooperation: One of the barriers of the centre is the reliance on inter-departmental collaboration. The government and its departments need to work cooperatively if the centre is to be success, it needs to be apolitical and embraced by everyone. This also applies to devolved governments and nations to ensure they also capitalise on this resource.

Security and management: Another barrier is the security and management of data that is being used. It will be difficult to implement he digital centre whilst being compliant with GDPR, given the nature of the data the system will collect. Appropriate storage solutions need to be assessed to ensure privacy and security of its data, especially sensitive data, and how this data will be managed in a way that users are comfortable with while retaining ease of access for appropriate use. A way to address this may be to implement a simplified terms of service (that is easily understandable and brief) that outlines how data is being used, why it is being used, and how it will benefit the user. This is particularly key as it will be data sharing across departments, sectors and systems.

Cost: The digital centre will be very costly to create, especially with the introduction of the 'kickstarter' tests and products, particularly the chatbot LLM. DSIT should seek help from the private sector to help implement the centre correctly and ensure that it is beneficial and make sure that the system provides real value to the users rather than becoming a 'white elephant' built around over-hyped technologies.

- **How can DSIT address these barriers?**

Collaboration between the private and public sector is integral to successfully addressing these barriers and operating the centre.

6. In addition, the committee welcomes submissions on the following points:

- **How should the National Data Library proposed by the government be taken forward?**

The National Data Library can be a major asset for the UK, but it must not be overcomplicated. Strong data management and governance would be a key benefit. The government should at minimum engage with organisations that are already looking / have already looked into this, such as: GDS, ODI, and Transport for London. GDS's approach that used Application Programming Interfaces (APIs) and data standards to access existing databases, as opposed to trying to create unified databases, proved effective and cost-efficient.

- **How should the digital centre be delivered in a way that ensures equitable access to public services?**

Equitable access should be designed into the digital centre, but this needs to be balanced to ensure that it will succeed. How systems are executed and planned, communicated, advertised and customer awareness is key. Further research into how GDS approached designing digital services, alongside guidance they published, will show how they successfully implemented equitable access.

However, there still remains part of the population who do not have access to the internet, even though this number is decreasing. This will make it difficult to provide a fully digital service that has fully equitable access. The digital centre must emphasise that digital is not the only way to access what is needed. The system offered should come in a multi-model format, allowing users to benefit from the centre regardless of circumstance. This will help make the centre accessible for as many users as possible. However, the multi-model system must be done by design from the inception, otherwise it will cost government a lot to amend it whilst in operation. The multi-model could be based on an 80/20 solution, the assumption that 80% of users will be happy to access the digitalised service, but 20% of users would prefer to access it through human interaction.